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EXAMINER	
QIN, YIXING	
ART UNIT	**PAPER NUMBER**
2622	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/894,928	FERLITSCH, ANDREW	
	Examiner	Art Unit	
	Yixing Qin	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 June 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 June 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *06 June 2002*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Objections

Claims 11-13 objected to because of the following informalities: Claims 11-13 should not all say "the method according to claim 12..." It seems that they should depend on 10 (or at least a preceding claim). Claim 12 might depend on 10 or 11. Claim 13 might depend on 10 or 11 or 12. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 14 recites the limitations "said print processor and said user input" in lines 6 and 7 of claim 14. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 20 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Computer signals in electronic transmissions claimed as computer listings per se, i.e., the descriptions or expressions of the signal, are not physical 'things.'...In contrast, a claimed circuit (or another physical entity which can contain the signal) encoded with a signal is an element which defines structural and

functional interrelationships between the signal and the rest of the machine to which the circuit could be used in (i.e. a computer) which permit the signal's functionality to be realized, and is thus statutory.

An acceptable, parallel example would be written in the format as seen in claim 19, where a medium stores instructions. One cannot simply claim the instructions by themselves, like one cannot claim the signals by themselves.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

I. Claims 1, 4, 10-13 and 19 rejected under 35 U.S.C. 103(a) as being unpatentable over Barry et al (U.S. Patent No. 6,825,943).

The Barry et al reference discloses a method and apparatus for parallel printing of large documents.

1. Claim 1

A method for providing driver-independent, printer-independent page manipulation options in a printing system, said method comprising:

- **creating a spool data file;**
- Barry et al discloses in Fig. 1a (item 104) and column 3, line 13 "...a print job file". Column 1, lines 53-54 explains that their invention has a step of spooling the print job file.
- **creating a Page-Independent Spool File (PISF) index file from said spool data file;**
- Barry et al discloses in Fig. 1a (item 110) and column 3, lines 15-19 that there is a "print control file 110 for storing job control information." Also, column 6, lines 9-13 explains that this control file has "operating parameters and program operators for controlling the operation of the processing of the print job file. " This control file 110 can read on the PISF since it seems to perform similar functions.
- **allowing manipulation of said PISF index file to effect document page manipulation options; and**
- Barry et al discloses in Fig. 2a (item 214) that users can manually define parameters. The other path would be to simply read the control file. However, it does not disclose that the user can go and change the control file.
- Column 6, lines 9-13 discloses that Fig. 2a (item 204) is used to "update the job control file 110..." It would be obvious that this process could be a computer update or a user could update it. The motivation for having a user update would be for on-the-fly manipulation of printing options.
- **accessing said PISF index file to execute a print job.**

- Barry et al discloses in Fig. 2a (item 204) and column 6, lines 9-13 that "[t]he flow then proceeds to a block 204 to update the job control file 110 which contains operating parameters and program operators for controlling the operation of the processing of the print job file."

4. Claim 4

The method of claim 1 wherein

- **said PISF index file comprises print job commands, page commands and page data.**
- Again, Barry et al discloses in column, 6 lines 9-13 that "...the job control file 110, which contains operating parameters and program operators for controlling the operation of the processing of the print job file." These could read on the commands for the print job and the page.
- Furthermore, Barry et al discloses in column 3, lines 27-29, a "language processor 120 for extracting information from the job control file 110..." Column 3, lines 42-48 gives an example that the language processor can extract data about the number of pages (i.e. **page data**).

10. Claim 10

A method for providing document formatting options in a printing system, said method comprising:

- **creating a Page-Independent Spool File (PISF) index file;**

- **manipulating said PISF index file to effect document formatting options; and**
- **accessing said manipulated PISF index file to execute a print job.**
- These limitations have all been addressed in the rejection to claim 1.

11. Claim 11

The method of claim 12 wherein

- **said creating, said manipulating and said accessing are accomplished with a print processor.**
- Barry et al – column 7, lines 42-48. "[t]he substitute RIP instruction is configured and generated according to the RIP requirements and provides the instruction for performing a standard full RIP of the select portion as well as modifying the RIP to be performed on the remainder of the print job file to be processed by the particular processor that will perform the RIP for the select portion."

12. Claim 12

The method of claim 12 wherein

- **said creating, said manipulating and said accessing are accomplished through a spooler.**
- Barry et al discloses in column 3, lines 15-17, that "[p]rint spooler 108 includes a control file 110..."

13. **Claim 13**

The method of claim 12 wherein

- **said creating, said manipulating and said accessing are accomplished through a print assistant between a driver and a printer.**
- Barry et al discloses in column 3, lines 13-15, a "print driver 102." Also, column 3, lines 27-29 discloses a "language processor 120" and column 4, lines 19-20 discloses an "instruction operator 114." One can see from Fig. 1a and 1b that the language processor 120 or the instruction operator 114 can assist in the printing process.

19. **Claim 19**

A computer-readable medium comprising instructions for driver-independent, printer-independent document formatting, said instructions comprising the acts of:

- **creating a page-independent index file;**
- **manipulating said index file to effect document formatting options; and**
- **accessing said manipulated index file to execute a print job.**
- These limitations have been addressed in the rejection to claim 1.

II. Claims 2, 3, 5-9, and 14-18 rejected under 35 U.S.C. 103(a) as being unpatentable over Barry et al (U.S. Patent No. 6,825,943) in view of applicant's submitted prior art in the specification.

2. Claim 2

The method of claim 1 wherein

- **said spool data file is a Microsoft Windows Job Description File.**
- Barry et al discloses in column 1, lines 18-21 that PostScript is a popular means of describing documents for printing. One skilled in the art knows that PostScript can be used in the Windows operating environment, although it might not necessarily be termed a **"MS windows job description file."**
- Also, the applicant disclosed prior art in the background of the specification on pg 3, lines 19-21 explains that EMF and raw are two common types of data files in Windows.
- Both references are in the art of file spooling/control and printing. This will serve as the motivation for combining these two references from here forth.
- Therefore, It would have been obvious to one of ordinary skill in the art at the time of the invention to use EMF or raw data instead of PostScript. The motivation would have been that users would have had an easier time customizing or printing in various formats, depending on which one was more suited to the users' needs.

3. **Claim 3**

The method of claim 1 wherein said manipulation comprises

- **changing a print job to a format selected from the group consisting of booklet, Nup, reverse order, duplex, tablet, and PrintClub.**
- Barry et al discloses in column, 6 lines 9-13 that "...the job control file 110, which contains operating parameters and program operators for controlling the operation of the processing of the print job file." Barry et al does not explicitly disclose what these operating parameters are.
- However, the applicant discloses in the submitted prior art in the specification that N-up (page 2, lines 13-15) and "reverse order collation" (page 2 lines 17-19) are known formatting types. It would make sense to put these formatting options into the control file since it is describes the print job to be printed.
- Since both references are in the art of print job control and file spooling, it would have been obvious to one of ordinary skill in the art at the time of the invention to include different formatting types into a job control file. The motivation would be so that users can have various formatting options to customize a printed document the way that they wanted.

5. **Claim 5**

The method of claim 1 wherein

- **said PISF index file provides access to at least one Enhanced Metafile (EMF) file.**

- As mentioned above, in the rejection to claim 1, the control file 110 can read on the PISF. This control file 110 controls information in a print job file 104, but Barry et al does not explicitly disclose what format this print job file is in.
- However, The applicant's disclosure of the prior art states in page 3, line 19-21 that EMF and raw are two common types of data that Windows typically uses.
- Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use EMF or raw data in Barry et al's invention. The motivation would have been to use a widely recognized format for increased compatibility.

6. Claim 6

The method of claim 1 wherein

- **said PISF index file provides access to at least one raw format file.**
- See claim 5 above. Same rejection with raw data instead of EMF.

7. Claim 7

The method of claim 1 wherein

- **said manipulation of said PISF index file comprises changing the order of document pages.**
- Again, Barry et al only mentions "operating parameters" an "program operators" (column 6, lines 9-13), but does not disclose that these include any means of changing the order of the document pages.

- The applicant's disclosure of the prior art states in page 2, line 17-19 that "reverse order collation" is a known formatting option.
- Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include "reverse order collation" in Barry et al's invention . The motivation would have been to give users more printing manipulation options.

8. Claim 8

The method of claim 1 wherein

- **said manipulation of said PISF index file comprises changing the scale and placement of document pages.**
- Again, Barry et al only mentions "operating parameters" an "program operators" (column 6, lines 9-13), but does not disclose that these include any means of changing the scale or the placement of the document pages.
- The applicant's disclosure of the prior art states in page 2, line 13-19 that "N-up" and "reverse order collation" are known formatting options. N-up effectively changes the scale of the document since it puts multiple pages into one printed pages, and "reverse order collation" reverses the order in which pages are printed.
- Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include "N-up printing" and "reverse order collation" in

Barry et al's invention . The motivation would have been to give users more printing manipulation options.

9. Claim 9

The method of claim 1 wherein

- **said manipulation of said PISF index file comprises changing collation options.**
- See rejection to claims 7 and 8 above. "Reverse order collation" changes collation options.

14. Claim 14

A method for adding document formatting capability to a printing system, said method comprising:

- **initiating a print job for a document;**
- Barry et al discloses in Fig. 1a (item 100) a "print job input"
- **creating a PISF index file;**
- Barry et al discloses in Fig. 1a (item 110) and column 3, lines 15-19 that there is a "print control file 110 for storing job control information." Also, column 6, lines 9-13 explains that this control file has "operating parameters and program operators for controlling the operation of the processing of the print job file. " This control file 110 can read on the PISF since it seems to perform similar functions.

- **modifying said PISF index file, from said print processor, to make said print job conform to said user input; and**
- Barry et al discloses in Fig. 2a (item 214) that users can manually define parameters. The other path would be to simply read the control file. However, it does not disclose that the user can go and change the control file.
- Column 6, lines 9-13 discloses that Fig. 2a (item 204) is used to "update the job control file 110..." It would be obvious that this process could be a computer update or a user could update it. The motivation for having a user update would be for on-the-fly manipulation of printing options.
- **accessing said PISF index file, from said print processor, to obtain document formatting information for printing.**
- One can see in Fig. 1a of Barry et al that the control file 110 is accessed by the language processor 120 and/or the instruction operator for job file 114. Claim 3 above addresses the **document formatting information** portion of this limitation.

15. Claim 15

The method of claim 14 wherein

- **said PISF index file is produced by a print processor.**
- Barry et al discloses in column 7, lines 42-48 that "[t]he substitute RIP instruction is configured and generated according to the RIP requirements and provides the instruction for performing a standard full RIP of the select portion as well as

modifying the RIP to be performed on the remainder of the print job file to be processed by the particular processor that will perform the RIP for the select portion."

16. Claim 16

The method of claim 14 wherein

- **said PISF index file is produced by a spooler.**
- Barry et al discloses in column 3, lines 15-17 that "[p]rint spooler 108 includes a control file 110..."

17. Claim 17

The method of claim 14 wherein

- **said PISF index file is produced by a print system component in a print system between a driver and a printer.**
- See rejection to claim 13 above.

18. Claim 18

A printing system with driver-independent, printer-independent document formatting, said system comprising: a print processor comprising:

- **an indexer for creating a page-independent index file;**
- The spooler 108 as disclosed by Barry et al can read on the **indexer** (column 3, lines 15-17).

- **a modifier for modifying said index file to effect document formatting options; and**
- **a reader for accessing said manipulated index file to execute a modified print job.**
- These limitations have been addressed in the rejection to claim 14.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yixing Qin whose telephone number is 703-306-4142. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles can be reached on 703-305-4712. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YQ